

IN THE CLAIMS:

Please amend the claims as follows.

1. (Currently Amended) A biomolecule microarray support prepared for immobilizing probe biomolecules to make a biomolecule microarray, ~~with~~ having a plurality of small-sized biomolecule-attachable spots arrayed in a regular arrangement on the surface, characterized in that the probe biomolecule-attachable spots have a highly accurate uniform size and shape a layer of biotin formed on the surface of the support and a layer of avidin or streptabiotin bound to the layer of biotin,

wherein the layer of biotin on the surface of the support is formed by covering the surface of the support other than spot areas with a cover coating by means of photolithography, attaching biotin to the exposed surface of the support in the spot areas, and removing the cover coating by etching to expose the surface of the support other than the spot areas, or

by attaching biotin on the entire surface of the support and covering, by means of photolithography, the layer of biotin in areas other than the spot areas with a cover coating to leave the layer of biotin exposed in the spot areas,

wherein the surface of the areas other than the spot areas is left exposed or covered with the cover coating,

and wherein the probe biomolecule-attachable spots have a uniform shape and size determined by photolithography, equal to or smaller than 200 μm .

~~formed by covering the surface of the support other than the spots with a cover coating, subjecting the surface of the support to a biomolecule-immobilizing agent coating forming treatment, and removing the cover coating, or formed by subjecting the surface of the support to a biomolecule-immobilizing agent coating forming treatment and covering the biomolecule-immobilizing agent coating on the surface other than the spots with a cover coating, by means of photolithography.~~

2. – 21. (Cancelled).

22. (New) The biomolecule microarray support of claim 1, wherein size of the spots are within a range of 50 to 200 μm in diameter for circular spots or in each side for square spots.

23. (New) A biomolecule microarray having probe biomolecules bound to a plurality of small-sized biomolecule-attachable spots arrayed in a regular arrangement on the surface of a support, characterized in that the probe biomolecule-attachable spots have a layer of biotin formed on the surface of the support and a layer of avidin or streptavidin bound to the layer of biotin,

wherein the layer of biotin on the surface of the support is formed by covering the surface of the support other than the spot areas with a cover coating by means of photolithography, attaching biotin to the exposed surface of the support in the spot areas, and removing the cover coating by etching to expose the surface of the support other than the spot areas, or

by attaching biotin on the entire surface of the support and covering by means of photolithography the layer of biotin other than the spot areas with a cover coating to expose the layer of biotin on the spot areas,

and wherein the probe biomolecule-attachable spots have a uniform shape and size determined by photolithography, equal to or smaller than 200 μm , and have a same amount of a probe biomolecule selected from the group consisting of DNA, RNA, PNA, and protein, each labelled with biotin, bound to the probe biomolecule-attachable spots by spotting equal to or greater than 3×10^9 probe biomolecules on each of the spots.

24. (New) The biomolecule microarray of claim 23, wherein the size of the spots are within a range of 50 to 200 μm in diameter for circular spots and in each side for square spots.